

WHAT IS CLAIMED IS:

1. A method of communicating in an enterprise network, comprising:

at a tunneling server, receiving from first client a point-to-point protocol signal encapsulated within a network address request header, the point-to-point protocol signal comprising an identifier identifying a destination client;

encapsulating the point-to-point signal within a network address response header; and

communicating the network address response encapsulated signal toward the destination client.

2. The method of Claim 1, wherein the network address request header comprises a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header.

3. The method of Claim 1, wherein the network address response header comprises a Dynamic Host Configuration Protocol OFFER header or a Bootstrap Protocol RESPONSE header.

4. The method of Claim 1, wherein the point-to-point protocol signal encapsulated within a network address request header comprises a tunneling header appended to the point-to-point protocol signal and encapsulated within the network address request header, the tunneling header operable to facilitate maintenance of a tunneling session between the tunneling server and the first client.

5        5.    The method of Claim 4, wherein the tunneling header comprises a tunneling header selected from the group consisting of a Layer Two Tunneling Protocol (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding (L2F) header.

10       6.    The method of Claim 1, wherein the point-to-point protocol signal encapsulated within the network address response header comprises a tunneling header appended to the point-to-point protocol signal and encapsulated within the network address response header, the tunneling header operable to facilitate maintenance of a tunneling session between the tunneling server and the destination client.

15       7.    The method of Claim 1, wherein communicating the network address response encapsulated signal toward the destination client comprises communicating the signal toward a router operable to relay the network address response encapsulated signal to the destination client without referencing a routing table indexed by data channel addresses.

25       8.    The method of Claim 7, wherein the identifier comprises a control channel address identifying the destination client, the control channel address being different than any data channel address recognized by the router.

30       9.    The method of Claim 1, wherein the point-to-point signal comprises an identifier of the destination client other than a control channel address, and further comprising accessing a memory to determine, based on the identifier, a control channel address of the destination client.

10. The method of Claim 1, wherein the point-to-point protocol signal comprises information to be applied to an application residing at the destination client.

5           11. The method of Claim 10, wherein the application residing at the destination client comprises a maintenance application operable to diagnose operational characteristics of the second client.

10           12. The method of Claim 1, wherein the point-to-point protocol signal comprises at least a portion of an application to be installed on the second client.

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13. A computer readable medium operable to execute the following steps on a processor of a computer:

at a tunneling server, receiving from first client a point-to-point protocol signal encapsulated within a network address request header, the point-to-point protocol signal comprising an identifier identifying a destination client;

encapsulating the point-to-point signal within a network address response header; and

communicating the network address response encapsulated signal toward the destination client.

14. The computer readable medium of Claim 13, wherein the point-to-point protocol signal encapsulated within a network address request header comprises a tunneling header appended to the point-to-point protocol signal and encapsulated within the network address request header, the tunneling header operable to facilitate maintenance of a tunneling session between the tunneling server and the first client.

15. The computer readable medium of Claim 13, wherein the point-to-point protocol signal encapsulated within the network address response header comprises a tunneling header appended to the point-to-point protocol signal and encapsulated within the network address response header, the tunneling header operable to facilitate maintenance of a tunneling session between the tunneling server and the destination client.

16. The computer readable medium of Claim 13, wherein communicating the network address response encapsulated signal toward the destination client comprises communicating the signal toward a router operable to relay the network address response encapsulated signal to the destination client without referencing a routing table indexed by data channel addresses.

17. The computer readable medium of Claim 16, wherein the point-to-point signal comprises a control channel address identifying the destination client, the control channel address being different than any data channel address recognized by the router.

18. The computer readable medium of Claim 13, wherein the point-to-point signal comprises an identifier other than a control channel address of the destination client, and further comprising accessing a memory to determine, based on the identifier, a control channel address of the destination client.

19. The computer readable medium of Claim 13, wherein the point-to-point protocol signal comprises information to be applied to an application residing at the destination client.

20. The computer readable medium of Claim 13, wherein the point-to-point protocol signal comprises at least a portion of an application to be installed on the second client.

21. In an enterprise network comprising at least one client coupled to a tunneling server, a tunneling server comprising:

5 a tunneling module operable to receive a first point-to-point protocol signal encapsulated within a network address request header; and

10 a protocol stack operable to process at least a portion of the first point-to-point protocol signal to identify a control channel address associated with a destination client;

15 wherein the tunneling module is further operable to encapsulate the first point-to-point protocol signal within a network address response header and wherein the tunneling server is operable to communicate the first network address response encapsulated signal toward the destination client.

20 22. The tunneling server of Claim 21, wherein the network address request header comprises a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header.

25 23. The tunneling server of Claim 21, wherein the network address response header comprises a Dynamic Host Configuration Protocol OFFER header or a Bootstrap Protocol response header.

30 24. The tunneling server of Claim 21, wherein the first point-to-point protocol signal comprises a control channel address identifying the destination client, and wherein the tunneling server is further operable to communicate the first network address response encapsulated signal toward a router for forwarding to the destination client without reference to a routing table indexed by data channel addresses.

25. The tunneling server of Claim 21, wherein the first point-to-point protocol signal is encapsulated within a tunneling header and further encapsulated within the network address request header, and wherein the tunneling module is operable to process the tunneling header to maintain a tunneling session between the tunneling server and a client originating the first point-to-point protocol signal.

26. The tunneling server of Claim 25, wherein the tunneling header comprises a tunneling header selected from the group consisting of a Layer Two Tunneling Protocol (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding (L2F) header.

27. The tunneling server of Claim 21, wherein the tunneling module is operable to encapsulate the first point-to-point protocol signal within a tunneling header before encapsulating the first point-to-point protocol signal within the network address response header, the tunneling header operable to facilitate maintenance of a tunneling session between the tunneling server and the destination client.

28. The tunneling server of Claim 21, wherein the point-to-point protocol signal comprises a payload comprising information to be applied to an application residing at the destination client.

29. The tunneling server of Claim 28, wherein the payload comprises information to be applied to a maintenance application residing at the destination client and operable to diagnose operational characteristics of the destination client.

30. A system operable to facilitate communication with a destination client in an enterprise network, the system comprising:

a first client comprising:

5 a protocol stack operable to generate a first point-to-point protocol signal; and

a tunneling module operable to encapsulate the first point-to-point encapsulated signal within a network address request header;

10 wherein the first client is operable to communicate the network address request encapsulated signal toward a tunneling server; and

a tunneling server comprising:

15 a tunneling module operable to receive the first network address request encapsulated signal; and

a protocol stack operable to process at least a portion of the first point-to-point protocol signal to identify a control channel address associated with a destination client;

20 wherein the tunneling module is further operable to encapsulate the first point-to-point protocol signal within a network address response header and wherein the tunneling server is operable to communicate the first network address response encapsulated signal toward the destination client.

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